State of Alaska
FY2008 Governor's Operating Budget

Department of Environmental Conservation
Air Quality
Component Budget Summary

Component: Air Quality

Contribution to Department's Mission

Identify, prevent, abate, and control air pollution to protect public health and the environment in a cost-effective, accountable manner.

Core Services

Issue air quality permits to facilities that release potentially harmful pollutants.

- Provide compliance assistance and enforcement (inspections and operating report reviews).
- Community assistance to protect air quality.
- Air quality assessments.
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End Results	Strategies to Achieve Results
A: Air quality is protected. Target #1: No days violating air quality health based standards. Measure #1: # of days violating the air quality health based standards (from human sources of pollution). Target #2: No days violating air quality health based standards. Measure #2: # of days violating the air quality health based standards (from natural sources of pollution).	**A1: Establish standards for air quality that are protective of public health and the environment.** Target #1: Complete preliminary assessment of health impacts of diesel fuel emissions in rural communities by the end of FY2007. Measure #1: % of preliminary assessment of health impacts of diesel fuel emissions in rural communities completed by the end of FY2007. Target #2: Complete regional haze SIP by the end of FY2008. Measure #2: % of SIP for regional haze complete by the end of FY2008. **A2: Improve and streamline air permit practices.** Target #1: All categories of permits will have standardized applications and internal review procedures by the end of FY2008. Measure #1: % of permits categories that have standardized application and internal review procedures. Target #2: 95% of construction and minor permits issued within 130 days of receiving a completed application. Measure #2: % of construction and minor permits issued within 130 days of receiving a completed application. **A3: Minimize pollution from gasoline vehicles.** Target #1: For communities that have Inspection and Maintenance (I/M) programs, no more than 5% of vehicles are found to be out of compliance with tailpipe requirements. Measure #1: % of vehicles found to be out of compliance. **A4: Minimize pollution from stationary sources.**

	Target #1: 100% of facilities requiring air permits are in compliance. Measure #1: % of facilities found in compliance, or on an enforceable compliance schedule, or subject to formal enforcement action by the department.

Major Activities to Advance Strategies

Establish and operate air monitors.
- Develop strategies to address particulate matter pollution problems.
- Implement Quality Management System for permit and compliance services.
- Conduct compliance inspections and in-office compliance reviews.
- Develop foundations of an Alaska carbon strategy through research and collaboration.
- Improve on-line permitting services and compliance reporting for external users.
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FY2008 Resources Allocated to Achieve Results

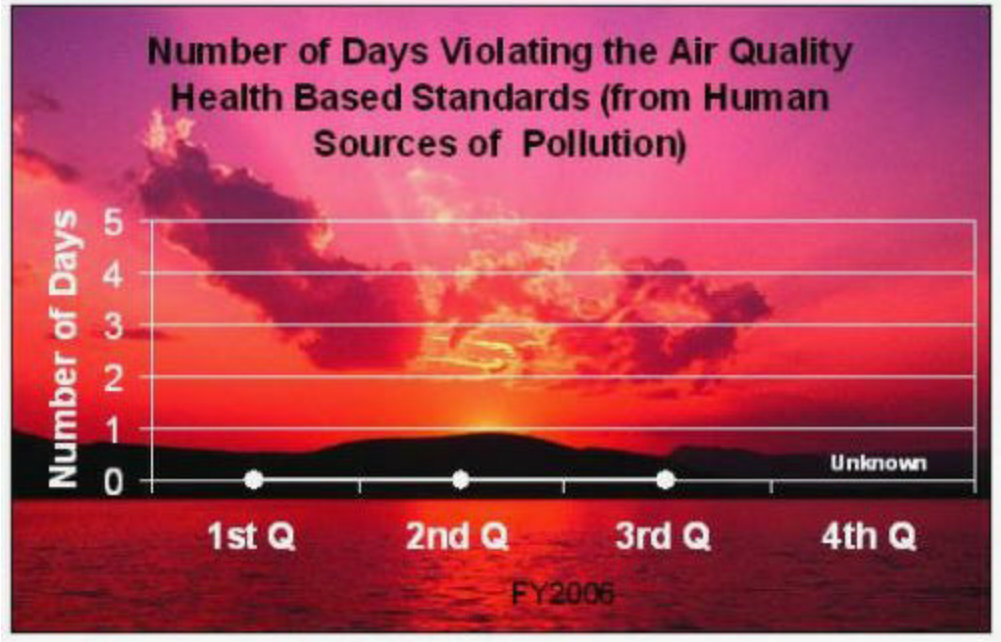
FY2008 Component Budget: $9,413,700

Personnel:	
Full time	60
Part time	0
Total	60

Performance Measure Detail

A: Result - Air quality is protected.

Target #1: No days violating air quality health based standards.
Measure #1: # of days violating the air quality health based standards (from human sources of pollution).

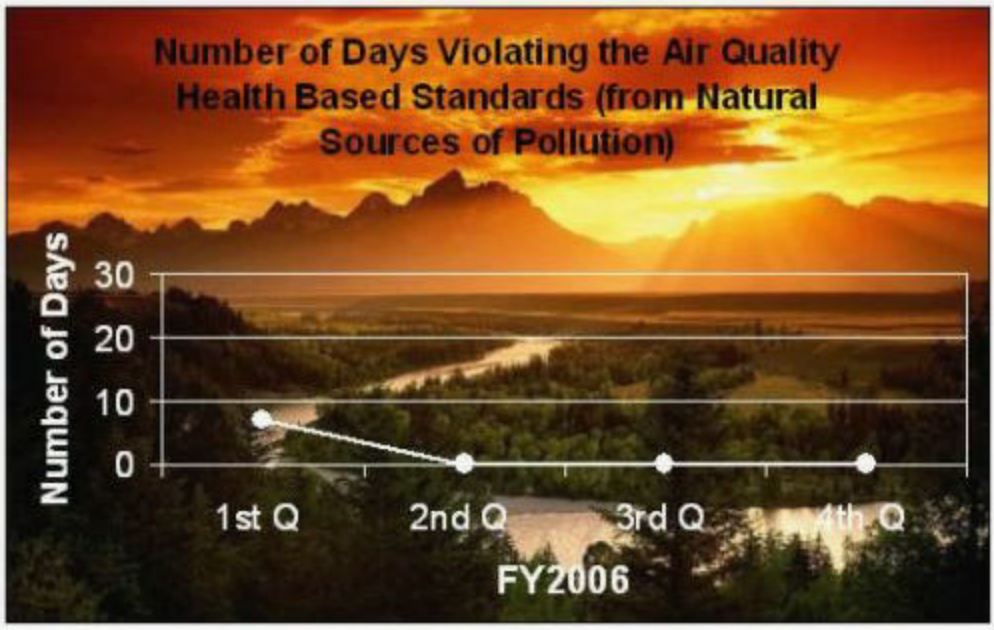


Analysis of results and challenges: DEC has been collecting ambient air data at selected locations around the state for over 25 years. Air monitoring is performed to ensure compliance with the National Ambient Air

Quality Standards designed to protect public health. The majority of the State's monitoring takes place in larger communities or where complaints have been received. There were no violations of the carbon monoxide (CO) standard during the winter 2005-2006 or fine particulate standard (PM 2.5) during the first three quarters of FY06 from human caused activity. The fourth quarter data for FY06 will be available December 2006.

In addition to the State monitoring network, the Air Quality division is engaged in an air monitoring project to measure airborne levels of dust (PM 10) pollution as part of a Department of Transportation (DOT) research project evaluating the effectiveness of paving roads in Kotzebue. High airborne dust levels from vehicle traffic on unpaved roads violate the health-based standard in Kotzebue and other rural communities. The Department will be working with the affected communities and DOT to develop an effective control strategy for dust in the Region.

Target #2: No days violating air quality health based standards.
Measure #2: # of days violating the air quality health based standards (from natural sources of pollution).



Analysis of results and challenges: Alaska has many sources of natural pollution; wind blown dust, dust from volcanic eruptions and smoke from forest fires. Although natural in source, these forms of pollution can severely impact public health and impact the public's enjoyment of Alaska.

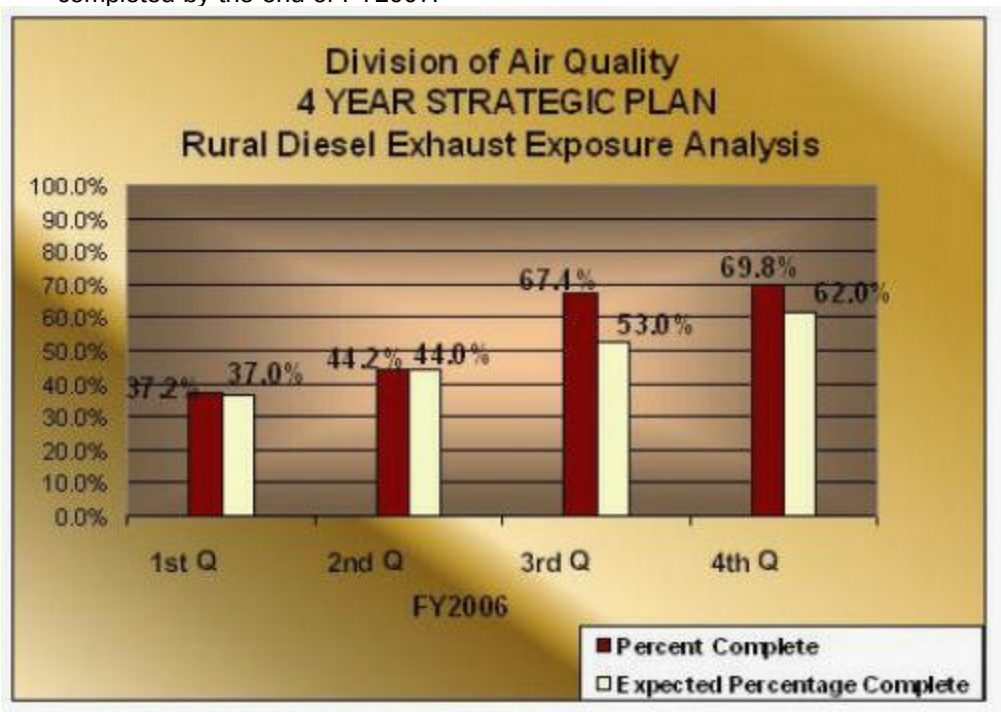
The US EPA has provisions in the Clean Air Act which do not hold a state liable for violations of the air quality standard when it is caused by natural sources. The state is, however, required to issue air advisories warning the public of potential dangers and recommending protective action.

Seven violations of the fine particle standards (PM2.5) were recorded in Fairbanks from wildfire activity in Interior Alaska and western Canada during the first quarter of FY2006. Alaskan communities from the Canadian Border westward to the Bering Sea were impacted by smoke during what was one of Alaska's worst fire season on record.

A1: Strategy - Establish standards for air quality that are protective of public health and the environment.

Target #1: Complete preliminary assessment of health impacts of diesel fuel emissions in rural communities by the end of FY2007.

Measure #1: % of preliminary assessment of health impacts of diesel fuel emissions in rural communities completed by the end of FY2007.



Analysis of results and challenges: The diesel health assessment project is designed to quantify health risks due to diesel exhaust pollutants. New federal rules will reduce diesel exhaust pollution from mobile equipment, like trucks and buses. Diesel fuel use in rural Alaska is dominated by power generation and home heating equipment – not mobile sources. Federal rules do not address these rural Alaska sources of diesel exhaust and did not consider the unique source and population exposure profile of rural Alaska. Credible scientific information is needed to determine whether diesel related health impacts are occurring in rural areas and whether the costs associated with converting communities to cleaner diesel fuel are justified.

This is a multi-year project. During fiscal year 2004, the department developed study proposals for both the health and air monitoring components of the project. In order to develop a scientifically sound approach for the study, a group was formed to review the options. The group was comprised of DEC staff, the Alaska Native Health Board Epidemiological Center, University of Alaska Institute for Circumpolar Health, and the Environmental Protection Agency. The group evaluated a number of study options.

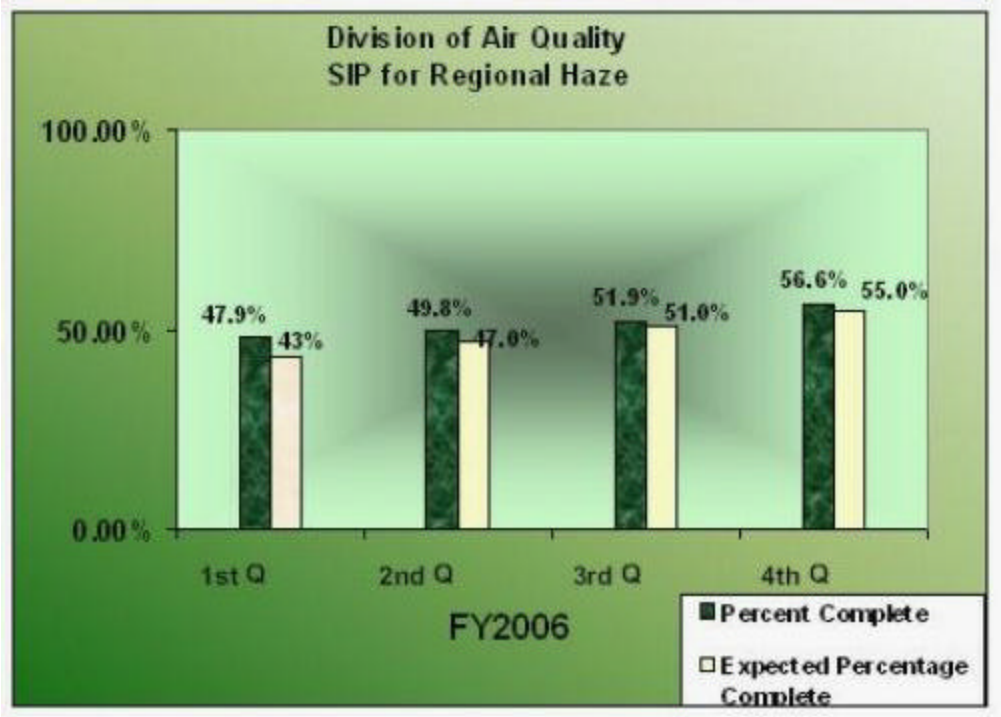
During fiscal year 2005, department staff worked with the University of Alaska, Institute of Circumpolar Health and the Alaska Native Health Board to find a willing community in which to conduct a pilot study on the impacts of diesel in rural areas. Staff analyzed meteorological information to determine communities with greater potential for impacts and contacted communities to determine interest. Visits were made to present the project to prospective communities and to determine logistics. Staff collected tribal and city assembly resolutions supporting the study from each candidate community. Ambient monitoring equipment was procured. A contract was established with the University of Alaska for the health assessment work. A community was selected for the pilot project. During the coming year, the pilot study will be initiated.

During fiscal year 2006, agreements were made between DEC and local community governments for placement and operation of air monitors for the pilot study. DEC identified monitoring sites, installed monitors, trained locals to run the monitors, and oversaw monitoring during the late winter and early spring. The University of Alaska, Institute of Circumpolar Health obtained approvals to perform pulmonary health measurements, recruited

and trained health assessors, recruited subjects, installed indoor air monitors, and performed health assessments.

To plan and conduct the project in the future the Department will analyze, and evaluate air monitoring and health data. The project is broken into major steps such as (but not limited to) project development, peer review of study design, ambient air and health data collection, analysis of data, and report drafting. The Department is measuring progress towards completing the pilot study by tracking the major project steps.

Target #2: Complete regional haze SIP by the end of FY2008.
Measure #2: % of SIP for regional haze complete by the end of FY2008.



Analysis of results and challenges: A Regional Haze State Implementation Plan (SIP) is required by the Clean Air Act to address visibility concerns in Denali National Park and three wildlife refuges in Alaska. The plan is due to EPA by December 17, 2007.

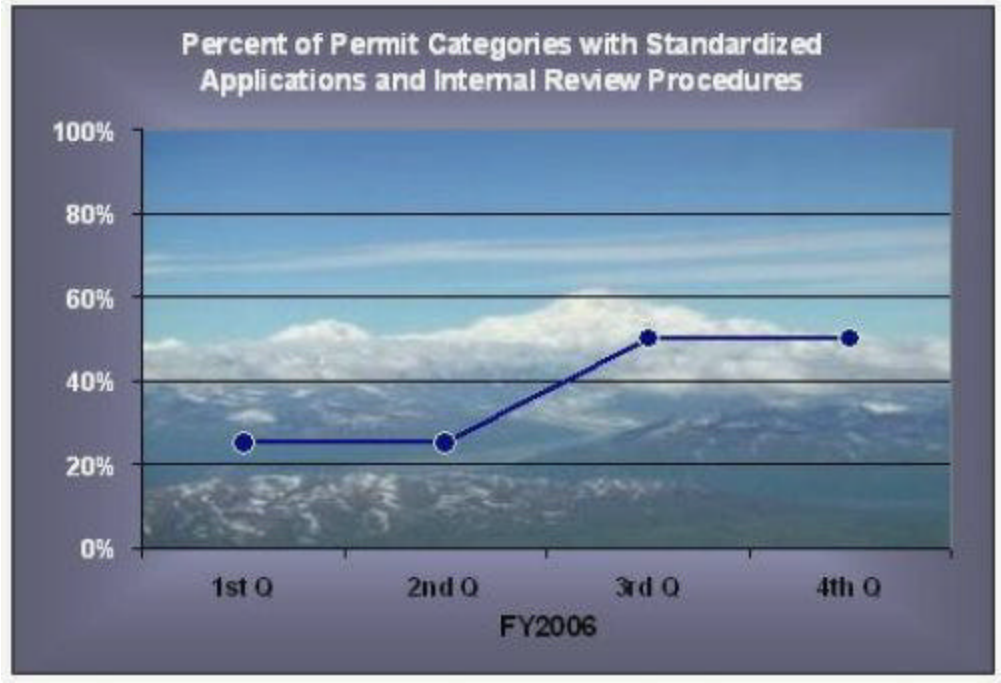
This is a multi-year project. During fiscal years 2004, 2005, and 2006, the department focused on the development of the technical information needed for the plan with help from external organizations. Federal agencies operate the primary visibility monitoring network. Alaska is a member of the Western Regional Air Partnership (WRAP), a regional planning organization that consists of states, tribes, and federal agencies. WRAP assists Alaska with developing technical information and policy tools needed for the SIP including: developing an inventory of emissions, visibility forecast models for future years and analysis of air monitoring samples. In addition to developing technical data, the department worked with land managing agencies to develop a Smoke Management Plan that will become a part of the regional haze SIP. The new Smoke Management Plan should allow for a balanced approach to managing controlled burns for resource development while also protecting visibility in Denali Park and other Alaska Class I visibility protection areas.

During the coming year, the department and these other agencies will complete work on the technical basis for the SIP and, if controls are warranted, evaluate control options. To do this, the Department will collect, analyze, and evaluate visibility impacts from air pollution in these areas, and identify controls to reduce those visibility impacts. The project is broken into major steps such as (but not limited to) the collection of technical information, analysis of control strategies, drafting of the SIP document, regulation development and the public adoption process. The Department is measuring progress toward completing the regional haze SIP by tracking major project steps.

A2: Strategy - Improve and streamline air permit practices.

Target #1: All categories of permits will have standardized applications and internal review procedures by the end of FY2008.

Measure #1: % of permits categories that have standardized application and internal review procedures.



Analysis of results and challenges: Standardized applications and internal review procedures allow the Department to act consistently and efficiently on permit applications. Our permitting program has four major categories of permits: Construction permits, general permits, facility specific operating permits, and minor source permits. General permits are either general operating permits or general minor permits.

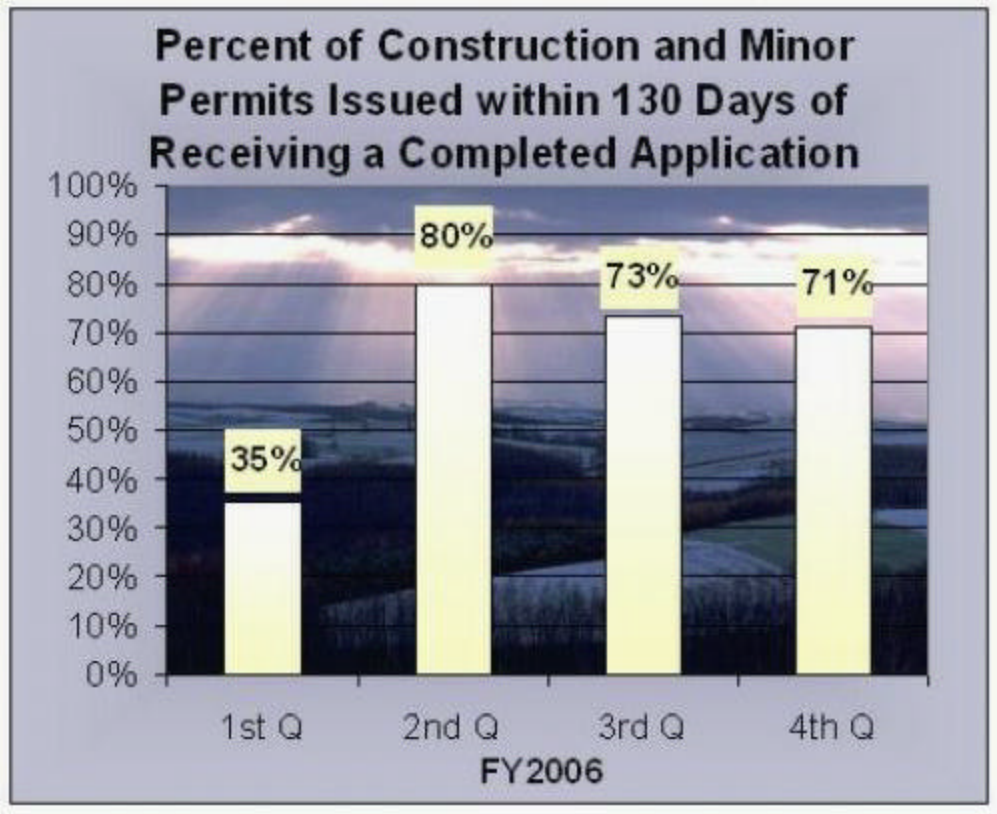
Beginning January 29, 2005, the effective date of new permit program regulations, construction and operating permit programs have been rewritten. Existing guidance documents, review procedures and application forms for operating and construction permits need to be updated.

Standard applications have been developed or updated for minor source permits and general permits. All applications are available on the Air Permits webpage. New regulations for Minor General Permit One were effective December 15, 2006. All general permits were updated to new federal regulations on March 31, 2006. Minor permits were updated on January 4, 2006 and July 24, 2006. Therefore, we have estimated that 50% of the source categories have current standardized applications and internal review procedures.

Standard review procedures for all permit categories need to be updated. The current four major categories do not accurately reflect the intricacy of the permits or review process. A standardize review process requires a determination of specific requirements for the array of permit applications. The Air Program is developing a Quality Management system based on ISO 9000 standards beginning FY2007. We expect complete development of standardized applications and internal review procedures by FY2008.

The Emission fee study and new regulation adoption has slowed permit procedure development. In addition, the new fee regulations required by statute required significant changes in staff time accounting, billing, and permit processing procedures, further delaying standard permit procedure development.

Target #2:95% of construction and minor permits issued within 130 days of receiving a completed application.
Measure #2: % of construction and minor permits issued within 130 days of receiving a completed application.



Analysis of results and challenges: : Results for this measure are calculated by dividing the number of permits issued within the quarter in 130 days or less by the total number of permits issued during the quarter. The clock starts when a complete application is received and flat fees have been paid and, if additional information is needed, stops until the information has been provided.

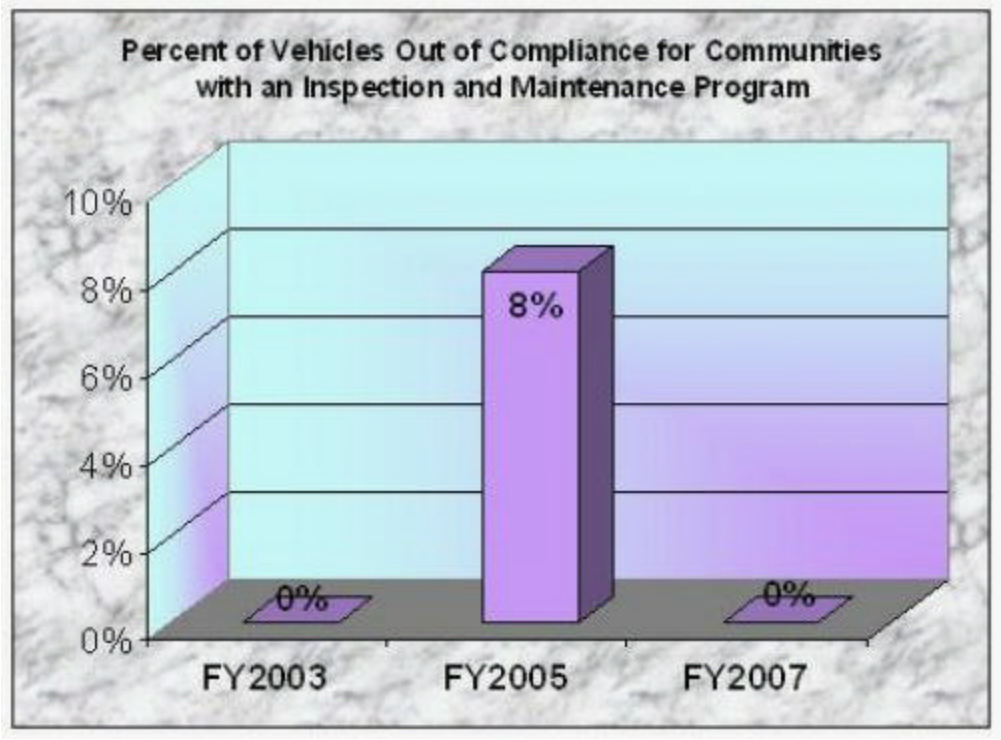
The percentage of permits issued within 130 days was down during the last quarter of FY2006 partially because of staff turnover. Two positions were vacant during the last two quarters. New staff were hired but the loss of experience and the time required hiring and training new staff reduced efficiency. Another vacancy opened in the fourth quarter of FY06. The program is currently recruiting for that position.

Included in this year's projection for streamlining the program are: establishment of a new quality management system; implementation of on-line electronic permitting; and hiring, training and retaining staff. Program activities are on track to have improvements completed and we expect to reduce construction permitting times by the end of FY2006.

A3: Strategy - Minimize pollution from gasoline vehicles.

Target #1: For communities that have Inspection and Maintenance (I/M) programs, no more than 5% of vehicles are found to be out of compliance with tailpipe requirements.

Measure #1: % of vehicles found to be out of compliance.



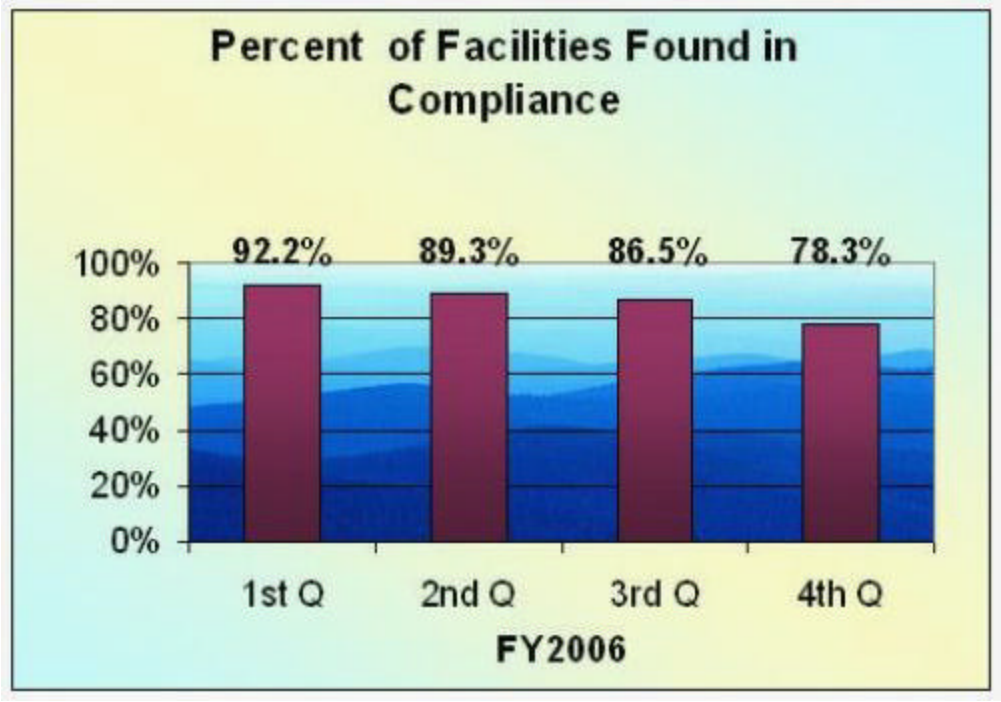
Analysis of results and challenges: Anchorage and Fairbanks exceeded health based standards for carbon monoxide in 1972. This required the start of a vehicle inspection program in 1985. Vehicles registered in both communities must pass an emission inspection to be registered or have their registration renewed by DMV. In addition, vehicle owners who live outside of Anchorage or Fairbanks but commute to work and school inside these locales are required to have an inspection.

To determine compliance with the vehicle inspection program, the department performs a survey of in-use vehicles every other year in Anchorage and Fairbanks, recording the license plate and windshield sticker information. In order to be statistically valid, approximately 10,000 non-duplicative vehicle license plate recordings are needed in Anchorage and approximately 6,000 in Fairbanks. In-use vehicle records from the survey are electronically compared to the I/M inspection database, which can identify whether the vehicle has a current inspection.

The time and location for each survey is selected very carefully. Surveys are not conducted during evenings or weekends. Emphasis is placed on areas used by the local resident, businesses, and school parking lots. Information is collected in winter when carbon monoxide problems exist. Those vehicles that do not need an inspection are excluded. The time necessary to collect the number of vehicle observations is very labor intensive. Due to these limitations of time and expense, data is collected once every two years. Data collection is next scheduled for January to March of 2007.

A4: Strategy - Minimize pollution from stationary sources.

Target #1:100% of facilities requiring air permits are in compliance.
Measure #1: % of facilities found in compliance, or on an enforceable compliance schedule, or subject to formal enforcement action by the department.



Analysis of results and challenges: These figures represent the number of permitted stationary sources that have unaddressed compliance issues and the total number of permitted sources. Air program inspectors record data regarding source compliance issues found through public complaints, permittee self-reporting, and during the inspectors' scheduled compliance evaluations. The program evaluates compliance status of each major permitted source no less than once every two years and the compliance status of each synthetic minor permitted source no less than once every five years.

The percentage of permitted sources found in compliance is lower than that during FY2005. Compliance rates dropped from 92 percent to 78 percent during the first three quarters of FY2006. We attribute this downward trend to recordkeeping and data tracking improvements. Previously staff did not consistently log these events into the department's database. The program improved event logging through its compliance assurance standardization initiative, and expects compliance trends to remain in the mid 80 percent range during FY2007.

Key Component Challenges

Rural Alaska communities are facing a major decision about diesel fuel use. They must decide whether to incur the cost of building a separate fuel tank infrastructure for handling the new cleaner diesel fuel federally mandated for trucks, buses, newly purchased construction equipment and diesel engines used for power generation; or to convert their entire community to the cleaner but more expensive fuel for all uses. Either case will incur significant costs for the community, individuals and the state. In July, 2006 Alaska succeeded in gaining an opportunity to further explore the Alaska specific costs and health benefits of using the cleaner ultra low sulfur diesel fuel in diesel engines located in hundreds of rural communities. EPA's newly adopted standards for new diesel engines provided an exclusive opportunity for Alaska to revisit the decision due to the unique and potential cost hardship to rural Alaskans. A pilot phase air health study was accomplished in one rural village in 2006. In FY2007, the Division of Air Quality is working closely with the Alaska Village Electric Cooperative to complete a health and economic assessment to determine the impacts of the new standards and develop a plan for Alaska for EPA consideration.

EPA revised the airborne particulate matter health standards in September, 2006. The revised fine particle standard, PM2.5, is set at a lower, more stringent value due to recent medical evidence. Fairbanks is not meeting this more

stringent health standard. In addition, EPA has retained the coarse particle standard, PM 10, at the same exposure limit. Air monitoring in rural communities has shown that several communities (Bethel, Kotzebue and nearby villages) are not meeting the coarse particle health standard due largely to vehicle generated dust from unpaved roads and trails. A significant multi-year effort will be necessary by state and local governments to reduce pollution to meet health standards.

In cooperation with Department of Transportation Public Facilities (DOTPF), DEC will:

- Develop a strategy to prioritize and selectively implement dust control measures in one or more rural communities to reduce coarse particle air pollution.
- Selectively retrofit diesel fueled vehicles in the Fairbanks area with lower emitting technologies to reduce fine particle air pollution.

Air permits are important to maintaining Alaska's excellent air quality for future generations. The 2003 reforming legislation and associated regulations, revised major source permitting to be consistent with federal requirements and established a streamlined process for minor permits. While all legal and structural changes to accomplish permit reform have been completed, numerous implementation details including financial management must be successfully monitored and mentored in FY2008 to continue to reap additional performance and efficiency improvements expected with full implementation of the changes.

Significant Changes in Results to be Delivered in FY2008

Air permit reform, begun in 2003 under HB 160, will conclude with implementation of fee regulations in January 2007. Additional receipts from the new fee structure will provide enhanced program services as follows:

- Increase total Title V (Operating Permit) work actions (permits, complaint investigations and compliance actions) by approximately 34% - from an average of 360 actions to approximately 480 actions per year;
- Increase the total Title I (Construction Permit) actions by approximately 28% - from an average of 36 to approximately 46 per year; and
- Implement data automation and a quality management system to improve standard permit forms and review procedures.

Major Component Accomplishments in 2006

Urban and roadway connected areas of Alaska are successfully transitioning to cleaner diesel fuel which is gradually reducing roadway based emissions of harmful air pollutants for people in adjoining residential and pedestrian areas. The air quality division worked closely with refiners and fuel distributors to effect a smooth transition to meet federal ultra low sulfur diesel fuel requirements by October 15, 2006.

In FY2006, the air permits program issued ten air construction permits, thirty-four minor permits, and seven administrative amendments for new industrial stationary sources and modifications to existing sources.

Air permits staff investigated fifty-nine citizen air pollution complaints. Staff prepared sixty on-site and fifty-one off-site full compliance evaluations of permitted stationary sources to help operators comply with air permits. Staff resolved fifty compliance problems without the need for formal enforcement action. The air permits program prepared nine notices-of-violation and issued one compliance order by consent.

The air permit reform and streamlining is now structurally complete – all statutory and regulatory changes are finalized. In FY2006, we realized the expected benefits of the reform – more rational, predictable, and reliable permitting. The division is achieving shorter permit delivery times and a greater use of minor source permits which provides flexibility, quick review and issuance. In FY2006/early FY2007, the last fine-tuning of the initial reform is taking place with the design of a Quality Management System (QMS) as a feedback loop for further efficiency and consistency improvements; and completion of a financial analysis report to adopt user fee rates necessary to sustain the reformed permitting program.

The component, in conjunction with other western state agencies, helped change EPA's proposed position to rescind a health standard for coarse sized airborne particles by compiling medical and anecdotal evidence that respiratory

illnesses are disproportionately high in rural Alaska communities and research in other countries indicated a compelling link between illness and airborne particle pollution.

The Department adopted regulations providing a four year, rather than two year, exemption for new vehicles to begin their biennial tailpipe emissions inspection. The regulations apply to vehicles in Anchorage and Fairbanks. The improved technology of new vehicles enable us to reduce the burden upon vehicle owners while maintaining clean air.

Statutory and Regulatory Authority

AS 46.03; AS 46.14; AS 46.45; 18 AAC 50; 18 AAC 52; 18 AAC 53; Federal Clean Air Act

Contact Information

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Air Quality
Component Financial Summary

All dollars shown in thousands

	FY2006 Actuals	FY2007 Management Plan	FY2008 Governor
Non-Formula Program:			
Component Expenditures:			
71000 Personal Services	4,190.7	5,273.9	5,996.7
72000 Travel	118.6	160.0	237.2
73000 Services	1,097.0	1,964.0	2,907.6
74000 Commodities	96.8	169.0	217.2
75000 Capital Outlay	94.2	55.0	55.0
77000 Grants, Benefits	0.0	0.0	0.0
78000 Miscellaneous	0.0	0.0	0.0
Expenditure Totals	**5,597.3**	**7,621.9**	**9,413.7**
Funding Sources:			
1002 Federal Receipts	1,223.2	1,678.5	1,678.5
1003 General Fund Match	849.6	884.5	982.7
1004 General Fund Receipts	289.2	305.1	477.0
1005 General Fund/Program Receipts	110.2	131.0	134.5
1007 Inter-Agency Receipts	285.4	147.7	167.8
1061 Capital Improvement Project Receipts	270.3	133.1	145.4
1093 Clean Air Protection Fund	2,006.8	2,966.0	4,253.7
1108 Statutory Designated Program Receipts	0.0	147.7	148.1
1156 Receipt Supported Services	562.6	1,228.3	1,426.0
Funding Totals	**5,597.3**	**7,621.9**	**9,413.7**

Estimated Revenue Collections

Description	Master Revenue Account	FY2006 Actuals	FY2007 Management Plan	FY2008 Governor
Unrestricted Revenues				
Unrestricted Fund	68515	143.9	150.0	150.0
Unrestricted Total		**143.9**	**150.0**	**150.0**
Restricted Revenues				
Federal Receipts	51010	1,223.2	1,678.5	1,678.5
Interagency Receipts	51015	285.4	147.7	167.8
General Fund Program Receipts	51060	110.2	131.0	134.5
Statutory Designated Program Receipts	51063	0.0	147.7	148.1
Receipt Supported Services	51073	562.6	1,228.3	1,426.0
Capital Improvement Project Receipts	51200	270.3	133.1	145.4
Restricted Total		**2,451.7**	**3,466.3**	**3,700.3**
Total Estimated Revenues		**2,595.6**	**3,616.3**	**3,850.3**

Summary of Component Budget Changes
From FY2007 Management Plan to FY2008 Governor

All dollars shown in thousands

	General Funds	Federal Funds	Other Funds	Total Funds
FY2007 Management Plan	**1,320.6**	**1,678.5**	**4,622.8**	**7,621.9**
Adjustments which will continue current level of service:				
-Fund Source Adjustment for Retirement Systems Increases	129.4	-129.4	0.0	0.0
Proposed budget increases:				
-Implementation of Air Permit Reform, Fee Adjustments	0.0	0.0	1,069.0	1,069.0
-FY 08 Retirement Systems Rate Increases	144.2	129.4	449.2	722.8
FY2008 Governor	**1,594.2**	**1,678.5**	**6,141.0**	**9,413.7**

Air Quality
Personal Services Information

Authorized Positions			Personal Services Costs	
	FY2007 Management Plan	FY2008 Governor		
Full-time	60	60	Annual Salaries	3,450,408
Part-time	0	0	Premium Pay	5,430
Nonpermanent	0	0	Annual Benefits	2,546,903
			Less 0.10% Vacancy Factor	(6,041)
			Lump Sum Premium Pay	0
Totals	**60**	**60**	**Total Personal Services**	**5,996,700**

Position Classification Summary

Job Class Title	Anchorage	Fairbanks	Juneau	Others	Total
Accountant II	1	0	0	0	1
Administrative Clerk III	1	1	3	0	5
Administrative Manager I	0	0	1	0	1
Administrative Manager IV	1	0	0	0	1
Analyst/Programmer III	2	0	0	0	2
Analyst/Programmer V	1	0	0	0	1
Chemist IV	0	0	1	0	1
Env Eng Associate	1	1	4	0	6
Env Eng Associate II	2	1	1	0	4
Environ Eng Asst II	1	0	1	0	2
Environ Engineer I	1	0	1	1	3
Environ Program Manager I	2	0	1	0	3
Environ Program Manager II	0	0	2	0	2
Environ Program Manager III	0	0	1	0	1
Environ Program Spec I	2	1	0	0	3
Environ Program Spec II	7	3	0	0	10
Environ Program Spec III	1	2	5	0	8
Environ Program Spec IV	4	0	0	0	4
Environ Program Technician	0	1	0	0	1
Maint Spec Etronics Journey II	0	0	1	0	1
Totals	**27**	**10**	**22**	**1**	**60**